```
              OBI
L7          1077 SEA FILE=CAPLUS ABB=ON  PSPA OR PSPC OR PSAA OR CBPA
L8             1 SEA FILE=REGISTRY ABB=ON  9001-50-7
L10         7327 SEA FILE=CAPLUS ABB=ON  L8 OR GLYCERALDEHYDE(1W)PHOSPHATE
              DEHYDROGENASE#
L12        33556 SEA FILE=CAPLUS ABB=ON  POLYSACCHARIDES/CT
L26         8853 SEA FILE=CAPLUS ABB=ON  IMMUNOSTIMULANT#/OBI
L27        26378 SEA FILE=CAPLUS ABB=ON  VACCINES/CT
L28            5 SEA FILE=CAPLUS ABB=ON  (L7 OR L10) AND L12 AND L4 AND (L26 OR
               L27)


L125           5 L24 OR L28


FILE 'WPIDS' ENTERED AT 11:49:37 ON 01 APR 2002
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FILE LAST UPDATED: 21 MAR 2002              <20020321/UP>
MOST RECENT DERWENT UPDATE            200219   <200219/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> SDI'S MAY BE RUN ON EVERY UPDATE OR MONTHLY AS OF JUNE 2001.
    (EVERY UPDATE IS THE DEFAULT). FOR PRICING INFORMATION
    SEE HELP COST <<<

>>> FOR UP-TO-DATE INFORMATION ABOUT THE DERWENT CHEMISTRY
    RESOURCE, PLEASE VISIT
         http://www.derwent.com/chemistryresource/index.html <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<


L31           42 SEA FILE=WPIDS ABB=ON  PSPA OR PSPC OR PSAA OR CBPA
L32          120 SEA FILE=WPIDS ABB=ON  (GLYCERALDEHYDE OR GLYCER ALDEHYDE)(1W)P
               HOSPHATE(W)(DEHYDROGENASE OR DE HYDROGENASE)
L34        14266 SEA FILE=WPIDS ABB=ON  POLYSACCHARIDE#
L35         9742 SEA FILE=WPIDS ABB=ON  ADJUVANT# OR SAPONIN# OR 3DMPL OR 3D
               MPL OR CPG
L36          795 SEA FILE=WPIDS ABB=ON  CARRIER PROTEIN# OR (DIPHTHERIA OR
               TETANUS)(2A)TOXOID#
L37          308 SEA FILE=WPIDS ABB=ON  CRM197 OR CRM 197 OR HEMOCYANIN# OR
               HAEMOCYANIN# OR (HEMO OR HAEMO)(W)CYANIN#
L38          447 SEA FILE=WPIDS ABB=ON  TUBERCULIN OR PURIFIED PROTEIN DERIV?
               OR PPD
L39          407 SEA FILE=WPIDS ABB=ON  HAEMOPHILUS INFLUENZAE
L40           74 SEA FILE=WPIDS ABB=ON  D PROTEIN#
L41            3 SEA FILE=WPIDS ABB=ON  (L31 OR L32) AND L34 AND L35 AND (L36
               OR L37 OR L38 OR L39 OR L40)



L30          912 SEA FILE=WPIDS ABB=ON  (STREP?(W)PNEUMONIAE) OR PNEUMOCOCC?
L31           42 SEA FILE=WPIDS ABB=ON  PSPA OR PSPC OR PSAA OR CBPA
L32          120 SEA FILE=WPIDS ABB=ON  (GLYCERALDEHYDE OR GLYCER ALDEHYDE)(1W)P
               HOSPHATE(W)(DEHYDROGENASE OR DE HYDROGENASE)
L34        14266 SEA FILE=WPIDS ABB=ON  POLYSACCHARIDE#
L45            4 SEA FILE=WPIDS ABB=ON  L30 AND (L31 OR L32) AND L34
```

=> fil capl; d que 124; d que 128; s 124 or 128; fil wpids; d que 141; d que 145; d que 150; s 141 or 145 or 150
FILE 'CAPLUS' ENTERED AT 11:49:37 ON 01 APR 2002
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 1 Apr 2002 VOL 136 ISS 14
FILE LAST UPDATED: 30 Mar 2002 (20020330/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.

L7	1077	SEA FILE=CAPLUS ABB=ON	PSPA OR PSPC OR PSAA OR CBPA
L8	1	SEA FILE=REGISTRY ABB=ON	9001-50-7
L9	1	SEA FILE=REGISTRY ABB=ON	128478-31-9
L10	7327	SEA FILE=CAPLUS ABB=ON	L8 OR GLYCERALDEHYDE(1W)PHOSPHATE DEHYDROGENASE#
L11	57	SEA FILE=CAPLUS ABB=ON	L9 OR 3D MPL OR 3DMPL
L12	33556	SEA FILE=CAPLUS ABB=ON	POLYSACCHARIDES/CT
L13	13032	SEA FILE=CAPLUS ABB=ON	ADJUVANT#/OBI
L14	10019	SEA FILE=CAPLUS ABB=ON	SAPONIN#/OBI
L15	247	SEA FILE=CAPLUS ABB=ON	(OLIGONUCLEOTIDE# OR OLIGO(A)NUCLEOTIDE#)/OBI(L)CPG
L16	2955	SEA FILE=CAPLUS ABB=ON	CARRIER (A)PROTEIN#/OBI
L17	1928	SEA FILE=CAPLUS ABB=ON	TOXOID#(L)(DIPHTHERIA OR TETANUS)/OBI
L18	158	SEA FILE=CAPLUS ABB=ON	CRM197 OR CRM 197
L19	5909	SEA FILE=CAPLUS ABB=ON	HEMOCYANIN#
L20	2028	SEA FILE=CAPLUS ABB=ON	TUBERCULIN#/OBI OR PURIFIED PROTEIN DERIV?/OBI
L21	5768	SEA FILE=CAPLUS ABB=ON	HAEMOPHILUS INFLUENZAE
L22	1041	SEA FILE=CAPLUS ABB=ON	D(A)PROTEIN#/OBI
L24	3	SEA FILE=CAPLUS ABB=ON	(L10 OR L7) AND L12 AND (L13 OR L14 OR L15 OR L11) AND (L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22)

L4	6745	SEA FILE=CAPLUS ABB=ON	STREP?(W)PNEUMONIA?/OBI OR PNEUMOCOCC?/

L127 15 L65 OR L71

FILE 'MEDLINE' ENTERED AT 11:49:59 ON 01 APR 2002

FILE LAST UPDATED: 26 MAR 2002 (20020326/UP). FILE COVERS 1958 TO DATE.

On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

MEDLINE is now updated 4 times per week. A new current-awareness alert frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

The OLDMEDLINE file segment now contains data from 1958 through 1965. Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in the Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

=> d que 190; d que 191; s 190 or 191; fil embase; d que l123; d que l124

L8	1	SEA FILE=REGISTRY ABB=ON 9001-50-7
L74	42991	SEA FILE=MEDLINE ABB=ON POLYSACCHARIDES, BACTERIAL+NT/CT
L75	77114	SEA FILE=MEDLINE ABB=ON BACTERIAL PROTEINS+NT/CT
L76	16654	SEA FILE=MEDLINE ABB=ON ADJUVANTS, IMMUNOLOGIC/CT
L77	407	SEA FILE=MEDLINE ABB=ON ADJUVANTS, PHARMACEUTIC/CT
L78	4304	SEA FILE=MEDLINE ABB=ON SAPONINS+NT/CT
L79	242772	SEA FILE=MEDLINE ABB=ON CARRIER PROTEINS+NT/CT
L80	3301	SEA FILE=MEDLINE ABB=ON DIPHTHERIA TOXOID+NT/CT
L81	5794	SEA FILE=MEDLINE ABB=ON TETANUS TOXOID+NT/CT
L82	3207	SEA FILE=MEDLINE ABB=ON HEMOCYANIN/CT
L83	3616	SEA FILE=MEDLINE ABB=ON TUBERCULIN/CT
L84	81278	SEA FILE=MEDLINE ABB=ON VACCINES+NT/CT
L85	392	SEA FILE=MEDLINE ABB=ON PSPA OR PSPC OR PSAA OR CBPA OR PNEUMOCOCCAL SURFACE PROTEIN(W)(A OR C)
L86	5165	SEA FILE=MEDLINE ABB=ON L8 OR GLYCERALDEHYDE(1W)PHOSPHATE DEHYDROGENASE#
L87	207	SEA FILE=MEDLINE ABB=ON 3DMPL OR 3D MPL OR (OLIGONUCLEOTIDE# OR ODN)(A)CPG
L88	400	SEA FILE=MEDLINE ABB=ON D PROTEIN
L89	18	SEA FILE=MEDLINE ABB=ON (L75 OR L85 OR L86) AND L74 AND (L76 OR L77 OR L78 OR L87 OR L88) AND ((L79 OR L80 OR L81 OR L82 OR L83))
L90	7	SEA FILE=MEDLINE ABB=ON L84 AND L89

L8	1	SEA FILE=REGISTRY ABB=ON 9001-50-7
L72	8346	SEA FILE=MEDLINE ABB=ON PNEUMOCOCCAL INFECTIONS+NT/CT
L73	9502	SEA FILE=MEDLINE ABB=ON STREPTOCOCCUS PNEUMONIAE/CT
L74	42991	SEA FILE=MEDLINE ABB=ON POLYSACCHARIDES, BACTERIAL+NT/CT
L75	77114	SEA FILE=MEDLINE ABB=ON BACTERIAL PROTEINS+NT/CT
L76	16654	SEA FILE=MEDLINE ABB=ON ADJUVANTS, IMMUNOLOGIC/CT
L77	407	SEA FILE=MEDLINE ABB=ON ADJUVANTS, PHARMACEUTIC/CT
L78	4304	SEA FILE=MEDLINE ABB=ON SAPONINS+NT/CT
L79	242772	SEA FILE=MEDLINE ABB=ON CARRIER PROTEINS+NT/CT

```
L30          912 SEA FILE=WPIDS ABB=ON  (STREP?(W)PNEUMONIAE) OR PNEUMOCOCC?
L31           42 SEA FILE=WPIDS ABB=ON  PSPA OR PSPC OR PSAA OR CBPA
L32          120 SEA FILE=WPIDS ABB=ON  (GLYCERALDEHYDE OR GLYCER ALDEHYDE)(1W)P
                 HOSPHATE(W)(DEHYDROGENASE OR DE HYDROGENASE)
L33        93487 SEA FILE=WPIDS ABB=ON  PROTEIN#
L34        14266 SEA FILE=WPIDS ABB=ON  POLYSACCHARIDE#
L43        13888 SEA FILE=WPIDS ABB=ON  VACCINE#
L46         2014 SEA FILE=WPIDS ABB=ON  L33(2A)ANTIGEN#
L50            4 SEA FILE=WPIDS ABB=ON  L30 AND (L31 OR L32 OR L46) AND L34 AND
                 L43 AND CONJUGATE#/TI


L126           8 L41 OR L45 OR L50

=> fil drugu; d que 165; d que 171; s 165 or 171; fil medl
FILE 'DRUGU' ENTERED AT 11:49:57 ON 01 APR 2002
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FILE LAST UPDATED: 26 MAR 2002      <20020326/UP>
>>>  DERWENT DRUG FILE (SUBSCRIBER)  <<<

>>>  SDI'S MAY BE RUN WEEKLY OR MONTHLY AS OF JUNE 2001.  <<<
>>>  (WEEKLY IS THE DEFAULT). FOR PRICING INFORMATION     <<<
>>>  SEE HELP COST                                       <<<

>>>  FILE COVERS 1983 TO DATE  <<<
>>>  THESAURUS AVAILABLE IN /CT  <<<


L54           25 SEA FILE=DRUGU ABB=ON  PSPA OR PSPC OR PSAA OR CBPA
L55          212 SEA FILE=DRUGU ABB=ON  (GLYCERALDEHYDE OR GLYCER ALDEHYDE)(1W)P
                 HOSPHATE(W)(DEHYDROGENASE OR DE HYDROGENASE)
L56        15226 SEA FILE=DRUGU ABB=ON  ADJUVANT# OR SAPONIN# OR 3DMPL OR 3D
                 MPL OR CPG
L57         3777 SEA FILE=DRUGU ABB=ON  POLYSACCHARIDE# OR POLY SACCHARIDE#
L58         1687 SEA FILE=DRUGU ABB=ON  CARRIER PROTEIN# OR (DIPHTHERIA OR
                 TETANUS)(2A)TOXOID#
L59          608 SEA FILE=DRUGU ABB=ON  CRM197 OR CRM 197 OR HEMOCYANIN# OR
                 HAEMOCYANIN# OR (HEMO OR HAEMO)(W)CYANIN#
L60          961 SEA FILE=DRUGU ABB=ON  TUBERCULIN OR PURIFIED PROTEIN DERIV?
L61         7037 SEA FILE=DRUGU ABB=ON  HAEMOPHILUS INFLUENZAE
L62           33 SEA FILE=DRUGU ABB=ON  D PROTEIN#
L64          333 SEA FILE=DRUGU ABB=ON  PROTEIN#(1A)ANTIGEN#
L65            2 SEA FILE=DRUGU ABB=ON  (L54 OR L55 OR L64) AND L57 AND L56 AND
                 (L58 OR L59 OR L60 OR L61 OR L62)


L51           21 SEA FILE=DRUGU ABB=ON  STREPT. PNEUMONIAE/CT
L53        10559 SEA FILE=DRUGU ABB=ON  STREPT./CT AND PNEUMONIAE/CT
L54           25 SEA FILE=DRUGU ABB=ON  PSPA OR PSPC OR PSAA OR CBPA
L55          212 SEA FILE=DRUGU ABB=ON  (GLYCERALDEHYDE OR GLYCER ALDEHYDE)(1W)P
                 HOSPHATE(W)(DEHYDROGENASE OR DE HYDROGENASE)
L57         3777 SEA FILE=DRUGU ABB=ON  POLYSACCHARIDE# OR POLY SACCHARIDE#
L64          333 SEA FILE=DRUGU ABB=ON  PROTEIN#(1A)ANTIGEN#
L70        12410 SEA FILE=DRUGU ABB=ON  VACCINES/CT OR VACCINATION/CT OR
                 IMMUNIZATION/CT
L71           13 SEA FILE=DRUGU ABB=ON  (L51 OR L53) AND (L54 OR L55 OR L64)
                 AND L57 AND L70
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L121        2927 SEA FILE=EMBASE ABB=ON  PNEUMOCOCCUS VACCINE/CT
L124           7 SEA FILE=EMBASE ABB=ON  L109 AND ((L110 OR L111 OR L112)) AND
                 (L107 OR L108 OR L121)


=> dup rem l128,l127,l125,l124,l126
FILE 'MEDLINE' ENTERED AT 11:50:41 ON 01 APR 2002

FILE 'DRUGU' ENTERED AT 11:50:41 ON 01 APR 2002
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FILE 'WPIDS' ENTERED AT 11:50:41 ON 01 APR 2002
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PROCESSING COMPLETED FOR L128
PROCESSING COMPLETED FOR L127
PROCESSING COMPLETED FOR L125
PROCESSING COMPLETED FOR L124
PROCESSING COMPLETED FOR L126
L129          38 DUP REM L128 L127 L125 L124 L126 (4 DUPLICATES REMOVED)
                 ANSWERS '1-7' FROM FILE MEDLINE
                 ANSWERS '8-22' FROM FILE DRUGU
                 ANSWERS '23-27' FROM FILE CAPLUS
                 ANSWERS '28-33' FROM FILE EMBASE
                 ANSWERS '34-38' FROM FILE WPIDS

=> d ibib ab 1-38; fil hom

L129 ANSWER 1 OF 38     MEDLINE
ACCESSION NUMBER:    2001643159     MEDLINE
DOCUMENT NUMBER:     21552091   PubMed ID: 11695675
TITLE:               Synthesis of Streptococcus pneumoniae type 3
                     neoglycoproteins varying in oligosaccharide chain length,
                     loading and carrier protein.
AUTHOR:              Lefeber D J; Kamerling J P; Vliegenthart J F
CORPORATE SOURCE:    Bijvoet Center, Department of Bio-Organic Chemistry Utrecht
                     University, The Netherlands.
SOURCE:              CHEMISTRY, (2001 Oct 15) 7 (20) 4411-21.
                     Journal code: 9513783. ISSN: 0947-6539.
PUB. COUNTRY:        Germany: Germany, Federal Republic of
                     Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200202
ENTRY DATE:          Entered STN: 20011107
                     Last Updated on STN: 20020227
                     Entered Medline: 20020226
AB   The preparation is described of a range of neoglycoproteins containing
     synthesised fragments of the capsular polysaccharide of Streptococcus
     pneumoniae type 3, that is beta-D-GlcpA-(1-->4)-beta-D-Glcp-(1-->O)-
     (CH2)3NH2 (1), beta-D-Glcp-(1-->3)-beta-D-GlcpA-(1-->4)-beta-D-Glcp-(1--
     >O)-(CH2)3NH2 (2), and beta-D-GlcpA-(1-->4)-beta-D-Glcp-(1-->3)-beta-D-
     GlcpA-(1-->4)-beta-D-Glcp-(1-->O)-(CH4)NH2 (3). A blockwise approach was
     developed for the synthesis of the protected carbohydrate chains, in which
     the carboxylic groups were introduced prior to deprotection by selective
     oxidation of HO-6 in the presence of HO-4 by using TEMPO
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L80        3301 SEA FILE=MEDLINE ABB=ON  DIPHTHERIA TOXOID+NT/CT
L81        5794 SEA FILE=MEDLINE ABB=ON  TETANUS TOXOID+NT/CT
L82        3207 SEA FILE=MEDLINE ABB=ON  HEMOCYANIN/CT
L83        3616 SEA FILE=MEDLINE ABB=ON  TUBERCULIN/CT
L85         392 SEA FILE=MEDLINE ABB=ON  PSPA OR PSPC OR PSAA OR CBPA OR
                PNEUMOCOCCAL SURFACE PROTEIN(W)(A OR C)
L86        5165 SEA FILE=MEDLINE ABB=ON  L8 OR GLYCERALDEHYDE(1W)PHOSPHATE
                DEHYDROGENASE#
L87         207 SEA FILE=MEDLINE ABB=ON  3DMPL OR 3D MPL OR (OLIGONUCLEOTIDE#
                OR ODN)(A)CPG
L88         400 SEA FILE=MEDLINE ABB=ON  D PROTEIN
L89          18 SEA FILE=MEDLINE ABB=ON  (L75 OR L85 OR L86) AND L74 AND (L76
                OR L77 OR L78 OR L87 OR L88) AND ((L79 OR L80 OR L81 OR L82 OR
                L83))
L91           1 SEA FILE=MEDLINE ABB=ON  (L72 OR L73) AND L89


L128          7 L90 OR L91


FILE 'EMBASE' ENTERED AT 11:50:16 ON 01 APR 2002
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 FILE COVERS 1974 TO 28 Mar 2002 (20020328/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


L8            1 SEA FILE=REGISTRY ABB=ON  9001-50-7
L10        7327 SEA FILE=CAPLUS ABB=ON  L8 OR GLYCERALDEHYDE(1W)PHOSPHATE
                DEHYDROGENASE#
L109       1010 SEA FILE=EMBASE ABB=ON  BACTERIAL POLYSACCHARIDE+NT/CT
L110       8519 SEA FILE=EMBASE ABB=ON  BACTERIAL PROTEIN/CT
L111        304 SEA FILE=EMBASE ABB=ON  PSPA OR PSPC OR PSAA OR CBPA OR
                PNEUMOCOCCAL SURFACE PROTEIN(W)(A OR C)
L112       3509 SEA FILE=EMBASE ABB=ON  CBPA OR L10
L113      48705 SEA FILE=EMBASE ABB=ON  ADJUVANT# OR SAPONIN# OR 3DMPL OR 3D
                MPL OR (OLIGONUCLEOTIDE OR ODN)(A)CPG
L114      10897 SEA FILE=EMBASE ABB=ON  CARRIER PROTEIN#
L115        826 SEA FILE=EMBASE ABB=ON  DIPHTHERIA TOXOID/CT
L116       4525 SEA FILE=EMBASE ABB=ON  TETANUS TOXOID/CT
L117        753 SEA FILE=EMBASE ABB=ON  HEMOCYANIN/CT
L118        337 SEA FILE=EMBASE ABB=ON  D PROTEIN
L119       4778 SEA FILE=EMBASE ABB=ON  TUBERCULIN/CT
L123          0 SEA FILE=EMBASE ABB=ON  L109 AND ((L110 OR L111 OR L112)) AND
                L113 AND (L114 OR L115 OR L116 OR L117 OR L118 OR L119)



L8            1 SEA FILE=REGISTRY ABB=ON  9001-50-7
L10        7327 SEA FILE=CAPLUS ABB=ON  L8 OR GLYCERALDEHYDE(1W)PHOSPHATE
                DEHYDROGENASE#
L107       4513 SEA FILE=EMBASE ABB=ON  STREPTOCOCCUS INFECTION/CT
L108      13316 SEA FILE=EMBASE ABB=ON  STREPTOCOCCUS PNEUMONIAE+NT/CT
L109       1010 SEA FILE=EMBASE ABB=ON  BACTERIAL POLYSACCHARIDE+NT/CT
L110       8519 SEA FILE=EMBASE ABB=ON  BACTERIAL PROTEIN/CT
L111        304 SEA FILE=EMBASE ABB=ON  PSPA OR PSPC OR PSAA OR CBPA OR
                PNEUMOCOCCAL SURFACE PROTEIN(W)(A OR C)
L112       3509 SEA FILE=EMBASE ABB=ON  CBPA OR L10
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Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200005
ENTRY DATE: Entered STN: 20000518
Last Updated on STN: 20000518
Entered Medline: 20000509

AB There is a global urgent need for a new efficient and inexpensive vaccine to combat pneumococcal disease, which should also be affordable in developing countries. In view of this need a simple low-cost technique to prepare such a vaccine was developed. The preparation of serotype 14 and 23F pneumococcal capsular polysaccharide (PnPS)-protein conjugates to be included in a forthcoming multivalent PnPS conjugate vaccine is described. Commercial lots of PnPSs produced according to Good Manufacturing Practice from Streptococcus pneumoniae serotype 14 (PS14) and 23F (PS23F) were partially depolymerized by sonication or irradiation in an electron beam accelerator. The PnPS fragments were conjugated to tetanus toxoid (TT) using a recently developed conjugation chemistry. The application of these new simple, efficient and inexpensive fragmentation and conjugation technologies allowed the synthesis of several PnPS-protein conjugates containing PnPS fragments of preselected sizes and differing in the degree of substitution. The PS14TT and PS23FTT conjugate vaccine candidates were characterized chemically and their immunogenicity was evaluated in rabbits and mice. All PnPS conjugate vaccines, unlike the corresponding plain polysaccharides, produced high IgG titres in both animal species. The PS14TT conjugates tended to be more immunogenic than the PS23FTT conjugates. The immune response to the PS14TT conjugates, but not to the PS23FTT conjugates, was related to the size of the conjugated polysaccharide hapten. Both types of conjugates elicited strong booster effects upon secondary immunizations, resulting in high IgG1, IgG2a and IgG2b titres.

L129 ANSWER 4 OF 38 MEDLINE
ACCESSION NUMBER: 96155135 MEDLINE
DOCUMENT NUMBER: 96155135 PubMed ID: 8585282
TITLE: Effect of conjugation methodology, carrier protein, and adjuvants on the immune response to Staphylococcus aureus capsular polysaccharides.
AUTHOR: Fattom A; Li X; Cho Y H; Burns A; Hawwari A; Shepherd S E; Coughlin R; Winston S; Naso R
CORPORATE SOURCE: W.W. Karakawa Microbial Pathogenesis Laboratory, Univax Biologics Inc., Rockville, MD, USA.
CONTRACT NUMBER: AI 33560-03 (NIAID)
SOURCE: VACCINE, (1995 Oct) 13 (14) 1288-93.
Journal code: X6O; 8406899. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199603
ENTRY DATE: Entered STN: 19960327
Last Updated on STN: 19960327
Entered Medline: 19960319

AB Conjugate vaccines were prepared with S. aureus type 8 capsular polysaccharide (CP) using three carrier proteins: Pseudomonas aeruginosa exotoxin A (ETA), a non-toxic recombinant ETA (rEPA), and diphtheria toxoid (DTd). Adipic acid dihydrazide (ADH) or N-succinimidyl 3-(2-pyridyldithio) propionate (SPDP) was used as a spacer to link the CP to carrier protein. All conjugates gave a high immune response with a boost after the second immunization. Conjugates prepared with ADH gave higher antibody titers than conjugates prepared with SPDP. IgG1 was the primary subclass elicited by all conjugates regardless of the carrier protein or the conjugation method used to prepare the vaccines. The

(2,2,6,6-tetramethyl-1-piperidinyloxy radical). After deprotection, the 3-aminopropyl spacer of the fragments was elongated with diethyl squarate (3,4-diethoxy-3-cyclobutene-1,2-dione) and the elongated oligosaccharides were conjugated to CRM197 (cross-reacting material of diphtheria toxin), KLH (keyhole limpet hemocyanin) or TT (tetanus toxoid). The resulting neoglycoconjugates varied in oligosaccharide chain length, oligosaccharide loading and protein carrier. These well-defined conjugates are ideal probes for evaluating the influence of the different structural parameters in immunological tests.

L129 ANSWER 2 OF 38 MEDLINE
ACCESSION NUMBER: 2001453311 MEDLINE
DOCUMENT NUMBER: 21391726 PubMed ID: 11500820
TITLE: Carrier-mediated enhancement of cognate T cell help: the basis for enhanced immunogenicity of meningococcal outer membrane protein polysaccharide conjugate vaccine.
AUTHOR: Perez-Melgosa M; Ochs H D; Linsley P S; Laman J D; van Meurs M; Flavell R A; Ernst R K; Miller S I; Wilson C B
CORPORATE SOURCE: Department of Immunology, University of Washington, Seattle, 98195, USA.
CONTRACT NUMBER: AI37107 (NIAID)
AI40102 (NIAID)
HD17427 (NICHD)
HD18184 (NICHD)
SOURCE: EUROPEAN JOURNAL OF IMMUNOLOGY, (2001 Aug) 31 (8) 2373-81.
Journal code: EN5; 1273201. ISSN: 0014-2980.
PUB. COUNTRY: Germany: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010814
Last Updated on STN: 20010917
Entered Medline: 20010913

AB Haemophilus influenzae type b capsular polysaccharide (PRP) conjugate vaccines, which are thought to induce T cell-dependent antibody production, induce protective responses after a single dose in individuals under 15 months of age. However, multiple doses of these vaccines are required to induce protective antibody responses in infants, with the exception of PRP conjugated to meningococcal outer membrane proteins (OMPC), which does so after a single dose. The basis for this difference is not fully understood, although others have proposed that OMPC and porins, the major protein component of OMPC, act as adjuvants or mitogens. In this report OMPC is shown to enhance CD40 ligand-mediated, T cell-dependent antibody production in mice. This paralleled the induction by OMPC of CD86, CD80 and CD40 costimulatory molecules on human neonatal and murine B cells and of Th1 cytokines. Neither porins nor lipopolysaccharide fully reproduced the effects of OMPC. These studies indicate that OMPC acts both as carrier and adjuvant, and thereby enhances T cell-dependent antibody responses in human infants.

L129 ANSWER 3 OF 38 MEDLINE
ACCESSION NUMBER: 2000165110 MEDLINE
DOCUMENT NUMBER: 20165110 PubMed ID: 10699336
TITLE: Preparation of pneumococcal capsular polysaccharide-protein conjugate vaccines utilizing new fragmentation and conjugation technologies.
AUTHOR: Pawlowski A; Kallenius G; Svenson S B
CORPORATE SOURCE: Swedish Institute for Infectious Disease Control, SE-17182, Solna, Sweden.
SOURCE: VACCINE, (2000 Mar 17) 18 (18) 1873-85.
Journal code: X6O; 8406899. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom

TITLE: Haemophilus b conjugate vaccines.
AUTHOR: Vella P P; Ellis R W
SOURCE: BIOTECHNOLOGY, (1992) 20 1-22. Ref: 90
Journal code: BIT; 8300602. ISSN: 0740-7378.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199207
ENTRY DATE: Entered STN: 19920724
Last Updated on STN: 20000303
Entered Medline: 19920713

L129 ANSWER 7 OF 38 MEDLINE
ACCESSION NUMBER: 89007097 MEDLINE
DOCUMENT NUMBER: 89007097 PubMed ID: 2844673
TITLE: Effectiveness of natural and synthetic complexes of porin and O polysaccharide as vaccines against Brucella abortus in mice.
AUTHOR: Winter A J; Rowe G E; Duncan J R; Eis M J; Widom J; Ganem B; Morein B
CORPORATE SOURCE: Department of Veterinary Microbiology, Cornell University, Ithaca, New York 14853.
SOURCE: INFECTION AND IMMUNITY, (1988 Nov) 56 (11) 2808-17.
Journal code: GO7; 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198811
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19881123

AB A single vaccination of mice with a complex of porin and smooth lipopolysaccharide (porin-S-LPS) extracted from virulent Brucella abortus 2308 provided significant protection (P less than 0.01 to P less than 0.001) against challenge with the same strain, equivalent to that achieved by vaccination with living attenuated B. abortus 19. The porin-S-LPS vaccine given without adjuvant or in several adjuvants (trehalose dimycolate and muramyl dipeptide; the pluronic polymer L-121 and muramyl dipeptide; or complexed with Quil A in immunostimulating complexes) provided equivalent protection. In contrast, one vaccination with porin complexed with rough LPS (porin-R-LPS) from a rough mutant of strain 2308 provided no protection with any adjuvant tested. In one experiment, two inoculations with the porin-R-LPS resulted in a low level of protection, probably owing to priming of the animals for production of O-polysaccharide-specific antibodies. However, one vaccination with rough-strain porin covalently bound to purified O polysaccharide conferred protection equal to that obtained with natural complexes of porin-S-LPS or with living strain 19. A synthetic vaccine containing long chains of O polysaccharide was more effective than one prepared with short chains. Protective vaccines caused the formation of increased concentrations of circulating O-polysaccharide-specific antibodies, although there were individual exceptions to the quantitative association between O-polysaccharide-specific antibodies and protection. Antibodies specific for porin or R-LPS were found in negligible quantities in vaccinated mice. These results provide additional evidence that the O polysaccharide will constitute an essential component of an effective subcellular vaccine against B. abortus and that O-polysaccharide-specific antibodies play an important role in protective immunity in brucellosis.

non-immunogenic CP and the conjugates were formulated with either monophosphoryl lipid A (MPL), QS21, or in Novasomes and evaluated in mice. While the adjuvants failed to improve the immunogenicity of the nonconjugated CP, a more than fivefold increase in the antibody levels was observed when these adjuvants were used with the conjugates. Significant rises in IgG2b and IgG3 were observed with all formulations. The enhancement of the immunogenicity and the IgG subclass shift, as seen with some adjuvants, may prove to be important in immunocompromised patients.

L129 ANSWER 5 OF 38 MEDLINE
ACCESSION NUMBER: 93114872 MEDLINE
DOCUMENT NUMBER: 93114872 PubMed ID: 8418041
TITLE: Meningococcal lipopolysaccharide (LPS)-derived oligosaccharide-protein conjugates evoke outer membrane protein- but not LPS-specific bactericidal antibodies in mice: influence of adjuvants.
AUTHOR: Verheul A F; Van Gaans J A; Wiertz E J; Snippe H; Verhoef J; Poolman J T
CORPORATE SOURCE: Eijkman-Winkler Laboratorium of Medical Microbiology, Experimental Medical Microbiology, Academic Hospital, Utrecht University, The Netherlands.
SOURCE: INFECTION AND IMMUNITY, (1993 Jan) 61 (1) 187-96. Journal code: GO7; 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199301
ENTRY DATE: Entered STN: 19930219
Last Updated on STN: 19930219
Entered Medline: 19930129

AB Meningococcal lipopolysaccharide (LPS)-derived oligosaccharides (OS) were coupled to tetanus toxoid (TT) and purified P1.7,16 outer membrane proteins (OMP). The immunogenicities of the conjugates with and without the addition of the adjuvant Quil A or the nonionic block polymer L121 were studied in mice. Immunotype L2 and L3,7,9 OS-TT conjugates induced immunoglobulin G (IgG) responses that were strongly augmented by Quil A and L121. These adjuvants not only enhanced the amount of IgG evoked but also shifted the IgG subclass distribution from mainly IgG1 toward the complement-activating subclasses IgG2a and IgG2b. The antibodies induced were directed against the OS part of meningococcal LPS. They were not bactericidal for group B meningococci. Both the L3,7,9 OS-P1.7,16 OMP conjugate and purified P1.7,16 OMP evoked a strong IgG response against the P1.7,16 OMP but not against the L3,7,9 LPS. These anti-OMP IgG responses were comparable to the IgG OMP-specific responses induced by the H44/76 or HIII-5 outer membrane vesicles but still did not lyse group B meningococcal strains. The IgG response evoked with OS-OMP or purified OMP consisted mainly of the IgG1 subclass, whereas the H44/76 or HIII-5 outer membrane vesicles induced high amounts of bactericidal IgG2a and IgG2b antibodies next to the IgG1 antibodies. The addition of the adjuvant Quil A or L121 to OS-OMP or OMP resulted in the induction of high levels of bactericidal anti-P1.7,16-specific OMP antibodies, as reflected by the presence of substantial amounts of IgG2a and IgG2b antibodies. These results indicate that (i) mouse anti-LPS antibodies evoked by LPS-derived OS-protein conjugates are not bactericidal for group B meningococci, (ii) extensive purification of P1.7,16 OMP can lead to the loss of the intrinsic adjuvant properties of outer membrane vesicle preparations, and (iii) the addition of suitable adjuvants restores the ability of these purified P1.7,16 OMP to induce bactericidal antibodies.

L129 ANSWER 6 OF 38 MEDLINE
ACCESSION NUMBER: 92288596 MEDLINE
DOCUMENT NUMBER: 92288596 PubMed ID: 1600377

SOURCE: Vaccine (18, No. 16, 1707-11, 2000) 3 Fig. 1 Tab. 24 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Department of Microbiology, University of Alabama at Birmingham, 658 BBLB, 845 19th Street South, Birmingham, AL 35294, U.S.A. (e-mail: dbriles@uab.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The potential to use **PspA** and other pneumococcal proteins to elicit protection against pneumococcal infection is reviewed with reference to **polysaccharide** vaccines, pneumococcal protein candidates for vaccines, **PspA**, elicitation of protective antibody to **PspA** in man and the potential application of pneumococcal proteins to human vaccines. **PspA** could be used in several different ways in the formulation of human vaccines. One possibility would be to formulate a vaccine containing a few **PspA** families. If sufficiently efficacious, **PspA** could permit the development of a stand alone protein vaccine that would be much less costly to produce than other conjugate vaccines. Another possibility would be to include one or more pneumococcal proteins in the vaccine to maximize protection. (conference paper: International Symposium on Immunity in the Elderly, Annecy, France, 1999).

L129 ANSWER 11 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-08574 DRUGU M
TITLE: Immunization of humans with recombinant pneumococcal surface protein A (rPspA) elicits antibodies that passively protect mice from fatal infection with Streptococcus pneumoniae bearing heterologous **PspA**.
AUTHOR: Briles D E; Hollingshead S K; King J; Swift A; Braun P A; Park M K; Ferguson L M; Nahm M H; Nabors G S
CORPORATE SOURCE: Univ.Alabama; Aventis; Univ.Rochester
LOCATION: Birmingham, Ala.; Rochester, N.Y., USA
SOURCE: J.Infect.Dis. (182, No. 6, 1694-701, 2000) 2 Fig. 4 Tab. 45 Ref.
CODEN: JIDIAQ ISSN: 0022-1899
AVAIL. OF DOC.: BBRB658, 1530 3rd Ave. S., Birmingham, AL 35294 U.S.A. (e-mail: dbriles@uab.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Immunization of humans with recombinant pneumococcal surface protein A (rPspA) elicited Ab that passively protected mice from fatal infection with Strept. pneumoniae bearing heterologous **PspA**. The immunizing rPspA/Rx1 was clade 2 and family 1. Human Ab elicited by a family 1 **PspA** protected against infection with Strept. pneumoniae expressing either family 1 or 2 **PspA** and with strains of all 3 capsular types tested: 3, 6A, and 6B. Data suggest that **PspA** may have efficacy as a human vaccine. The protection observed could have depended on the close antigenic similarities of the clade 2 immunizing **PspA** with the clade 2 **PspA** of the challenge strain. Despite the cross-protection revealed in these studies, it would seem wise that any **PspA**-containing vaccine include equal to or more than 1 member of each of the 2 major **PspA** sequence/cross-reactivity families.

L129 ANSWER 12 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-17111 DRUGU T M
TITLE: Prospects for pneumococcal vaccination in African children.
AUTHOR: Obaro S K
LOCATION: Fajara, Gambia

L129 ANSWER 8 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTDDUPLICATE 4
ACCESSION NUMBER: 1997-17257 DRUGU M
TITLE: Intranasal immunization of mice with **PspA** (pneumococcal surface protein A) can prevent intranasal carriage, pulmonary infection, and sepsis with Streptococcus pneumoniae.
AUTHOR: Wu H Y; Nahm M H; Guo Y; Russell M W; Briles D E
CORPORATE SOURCE: Univ.Alabama; Univ.Washington
LOCATION: Birmingham, Ala., St. Louis, Mo.; Boston, Mass., USA
SOURCE: J.Infect.Dis. (175, No. 4, 839-46, 1997) 2 Fig. 5 Tab. 41 Ref.
CODEN: JIDIAQ ISSN: 0022-1899
AVAIL. OF DOC.: Department of Microbiology, University of Alabama at Birmingham, 658 BBRB, Mail Box 10, Birmingham, AL 35294-2170, U.S.A. (D.E.B.).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Intranasal (i.n.) immunization of mice with pneumococcal surface protein A (**PspA**) induced salivary IgA and serum IgG and IgA, though antibody responses were dependent on the presence of cholera toxin B (CTB) as adjuvant. I.n. immunization with **PspA** produced against intratracheal and i.n. infection with virulent pneumococcal strains, and also gave some protection against i.v. and i.p. infection. I.n. immunization with **PspA** reduced nasopharyngeal carriage of homologous and heterologous pneumococcal strains, while parenteral immunization did not; i.n. protection was long-lasting. I.n. immunization with a conjugate of 6B **polysaccharide** (PS) with tetanus toxin (TT) induced serum IgG and barely detectable salivary IgA, and conferred some protection against nasopharyngeal carriage of pneumococci.

L129 ANSWER 9 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-35863 DRUGU T M
TITLE: Pneumococcal vaccination: current and future issues.
AUTHOR: Ortqvist A
CORPORATE SOURCE: Karolinska-Inst.
LOCATION: Stockholm, Swed.
SOURCE: Eur.Resp.J. (18, No. 1, 184-95, 2001) 3 Tab. 98 Ref.
CODEN: ERJOEI ISSN: 0903-1936
AVAIL. OF DOC.: Dept of Infectious Diseases, Karolinska Institutet, Karolinska Hospital, SE-17176, Stockholm, Sweden.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Current and future issues involving pneumococcal vaccination are reviewed. Pneumococcal vaccines are discussed. The cost-effectiveness of pneumococcal vaccination is evaluated. Findings indicate that the included serotypes correspond to those most often associated with penicillin resistance and vaccination is a possible tool in limiting the spread of antibiotic-resistant pneumococci.

L129 ANSWER 10 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-17089 DRUGU P
TITLE: The potential to use **PspA** and other pneumococcal proteins to elicit protection against pneumococcal infection.
AUTHOR: Briles D E; Hillngshead S; Brooks Walter A; Nabors G S; Ferguson L; Schilling M; Gravenstein S; Braun P; King J; Swift A
CORPORATE SOURCE: Univ.Alabama; Aventis-Pasteur; East-Virgina-Med.Sch.
LOCATION: Birmingham, Ala., Swiftwater, Pa.; Fairfax Norfolk, Va., USA

FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Glycoprotein conjugate vaccines are reviewed, with respect to the nature of the **polysaccharide** (PSC) capsule, conjugation strategies, glycoconjugate vaccine efficacy, clinical trial findings, genetic implications, and future directions of research. The review focuses on vaccines against Haemophilus influenzae type B (Hib), Strept. pneumoniae and Neisseria meningitidis. (conference paper: Centennial Meeting, BERNA: A century of Immunobiological Innovation, Berne, Switzerland, 1998).

L129 ANSWER 15 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1998-24625 DRUGU M T
TITLE: Vaccination against middle-ear bacterial and viral pathogens.
AUTHOR: Giebink G S
CORPORATE SOURCE: Univ.Minnesota
LOCATION: Minneapolis, Minn., USA
SOURCE: Ann.N.Y.Acad.Sci. (830, 330-52, 1997) 3 Tab. 121 Ref.
CODEN: ANYAA9 ISSN: 0077-8923
AVAIL. OF DOC.: Box 296 May, 420 Delaware Street, S.E., Minneapolis, MN 55455, U.S.A. (e-mail: giebi001@maroon.tc.umn.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Vaccination against middle-ear bacterial and viral pathogens is reviewed with reference to pneumococcal vaccines, conjugate pneumococcal vaccines, Haemophilus influenzae vaccines (nontypable), Moraxella catarrhalis vaccines, respiratory viral vaccines (including influenza vaccine) and passive immunoprophylaxis. Otitis media can be prevented by systemic immunization. Passive immunoprophylaxis also has potential for preventing this disease.

L129 ANSWER 16 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1993-17723 DRUGU M T
TITLE: Defective Antipneumococcal **Polysaccharide** Antibody Response in Children with Recurrent Respiratory Tract Infections.
AUTHOR: Sanders L A M; Rijkers G T; Kuis W; Tenbergen Meekes A J; Graeff Meeder B R de; Hiemstra I
LOCATION: Utrecht, Netherlands
SOURCE: J.Allergy Clin.Immunol. (91, No. 1, Pt. 1, 110-19, 1993) 1 Fig. 5 Tab. 58 Ref.
CODEN: JACIBY ISSN: 0090-7421
AVAIL. OF DOC.: University Hospital for Children and Youth, "Het Wilhelmina Kinderziekenhuis," Department of Immunology, P.O. Box 18009, 3501 CA Utrecht, The Netherlands. (7 authors).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB 45 Children with recurrent RTI were immunized with i.m. 23-valent pneumococcal vaccine (Pvax, Pneumovax, Merck-USA) and some with boosters of diphtheria toxoid, tetanus toxoid and poliomyelitis virus vaccine (DTP). A few of the children with normal serum Ig levels failed to respond to the Pvax, whereas the response to the booster immunization with **protein antigens** was appropriate. Of the patients with a humoral immunodeficiency, most failed to respond to Pvax. A defective immune response to **polysaccharide** antigens in patients necessitates long-term follow-up to distinguish transient maturational delay from a persistent selective impaired response to **polysaccharide** antigens, which may precede the development of humoral immunodeficiency disease.

SOURCE: Acta Trop. (75, No. 2, 141-53, 2000) 2 Tab. 70 Ref.
CODEN: ACTRAQ ISSN: 0001-706X
AVAIL. OF DOC.: Medical Research Council Laboratories, PO Box 273, Farjara, Gambia. (e-mail: sobaro@gamtel.gm).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Pneumococcal vaccination against Streptococcus pneumonia infections is reviewed with reference to risk factors including age, underlying illness, HIV, antecedent viral infection, malnutrition, malaria, genetic factors and socioeconomic factors; the history of pneumococcal vaccines; the development of pneumococcal conjugate vaccines; and pneumococcal **protein antigen** vaccines. Promising results in safety and immunogenicity studies have been seen using protein-**polysaccharide** conjugate vaccine. Following conjugation to a **protein** carbohydrate **antigens** are able to induce antibody response in a thymus-dependent manner. A major limitation of protein conjugation of pneumococcal **polysaccharide** in the number of serotypes that can be included in the vaccine preparation. (No EX.).

L129 ANSWER 13 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-07861 DRUGU P
TITLE: The potential for using protein vaccines to protect against otitis media caused by Streptococcus pneumoniae.
AUTHOR: Briles D E; Hollingshead S K; Nabors G S; Paton J C; Brooks Walter A
CORPORATE SOURCE: Univ.Alabama; Aventis-Pasteur
LOCATION: Birmingham, Ala., USA; North Adelaide, Austr.
SOURCE: Vaccine (19, Suppl. 1, S87-S95, 2000) 3 Fig. 8 Tab. 34 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: BBRB 658, 1530 3rd Ave. South, Birmingham, AL 35294-2170, U.S.A. (e- mail: dbriles@uab.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The potential for using protein vaccines to protect against otitis media caused by Strept. pneumoniae is reviewed. The pneumococcal proteins are compared with **polysaccharide** (PS)-protein conjugate vaccines. Potential pneumococcal proteins as vaccines (**PspA**, pneumolysin, **PsaA**, and **PspC**), otitis media, and nasal carriage are discussed. **PspA** cross-protection and pneumolysin and multi-protein vaccines are described. The inclusion of **PspA** and pneumolysin into the PS-protein conjugate vaccines may be able to enhance their efficacy against otitis media and may be able to constitute a successful all-protein pneumococcal vaccine. (conference paper: International Symposium on Otitis Media: A Preventable Disease?, Annecy, France, 2000).

L129 ANSWER 14 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-41198 DRUGU M
TITLE: Glycoprotein conjugate vaccines.
AUTHOR: Lindberg A A
CORPORATE SOURCE: Pasteur-Merieux-Sera+Vaccines
LOCATION: Marcy L'Etoile, Fr.
SOURCE: Vaccine (17, Suppl. 2, S28-S36, 1999) 3 Fig. 79 Ref.
CODEN: VACCDE ISSN: 0264-410X
AVAIL. OF DOC.: Pasteur Merieux Connaught, 1541 Avenue Marcel Merieux 69280, Marcy L'Etoile, France.
LANGUAGE: English
DOCUMENT TYPE: Journal

L129 ANSWER 17 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1992-36934 DRUGU P
TITLE: A Vaccine Carrier Derived From Neisseria meningitidis with Mitogenic Activity for Lymphocytes.
AUTHOR: Liu M A; Friedman A; Oliff A I; Tai J; Martinez D; Deck R
CORPORATE SOURCE: Merck-USA
LOCATION: West Point, Pennsylvania, United States
SOURCE: Proc.Natl.Acad.Sci.U.S.A. (89, No. 10, 4633-37, 1992) 5 Fig. 22 Ref.
CODEN: PNASA6 ISSN: 0027-8424
AVAIL. OF DOC.: Department of Cancer Research Merck Research Laboratories, West Point, PA 19486, U.S.A. (10 authors).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The major immunoenhancing protein (MIEP) of the outer membrane protein complex (OMPC, Merck) derived from Neisseria meningitidis serogroup B strain B11 in conjugation with polyribosyl ribitol phosphate (PRP), a T-cell independent capsular **polysaccharide** of **Haemophilus influenzae** type b, retained the immunogenicity of OMPC when given i.p. to adult mice or infant monkeys, even though it did not keep the **adjuvant** activity or lipopolysaccharide (LPS) of OMPC. MIEP was mitogenic for lymphocytes, inducing secretion of IL-2 by naive mouse and human T-helper cells. This mitogenic capability may be partly or wholly responsible for the increased immunogenicity of PRP conjugates made with MIEP compared to those made with diptheria toxoid (DT, Connaught) or DT mutant CRM197 (Praxis).

L129 ANSWER 18 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1992-51973 DRUGU M S V
TITLE: **Adjuvant** Properties of Stable Water-in-Oil Emulsions: Evaluation of the Experience with Specol.
AUTHOR: Boersma W J A; Bogaerts W J C; Bianchi A T J; Claassen E
LOCATION: Rijswijk, Lelystad, Netherlands
SOURCE: Res.Immunol. (143, No. 5, 503-12, 1992) 2 Fig. 1 Tab. 41 Ref.
CODEN: RIMME5 ISSN: 0923-2494
AVAIL. OF DOC.: Dept. of Immunol. and Microbiol., TNO Med. Biol. Lab., P.O. Box 45, 2280 AA Rijswijk, The Netherlands.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB **Adjuvant** properties of stable water-in-oil (WIO) emulsions are reviewed with emphasis on the effects of Specol (SP). SP when given with antigens, had immunostimulating properties similar to those of Freund's complete **adjuvant** (FAC), but is less toxic. The composition of SP, application as an immune response modifier, use in elicitation of specific immune responses and side-effects in veterinary medicine are detailed. The relationship between specific formulation of **adjuvants** and the effects on the well-being of experimental animals is discussed.

L129 ANSWER 19 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1991-34436 DRUGU M T
TITLE: Semisynthetic Vaccines Against Bacterial Meningitis.
AUTHOR: Costantino P; Viti S; Rappuoli R; Podda A
LOCATION: Siena, Italy
SOURCE: Chim.Oggi (9, No. 3, 13-15, 1991) 3 Fig. 1 Tab. 28 Ref.
ISSN: 0392-839X
AVAIL. OF DOC.: Sclavo R & D Vaccines, Via Fiorentina, 1-53100 Siena, Italy.
LANGUAGE: English

DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The construction of semisynthetic vaccines (carbohydrate-protein conjugates) against bacterial meningitis which are immunogenic in infants is reviewed. These vaccines are composed of purified capsular **polysaccharides**. They can be made immunogenic in children below 2 yr of age by the chemical coupling of poly- or oligosaccharides to proteins. These vaccines are likely to enter general use for the prevention of bacterial meningitis in children.

L129 ANSWER 20 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1989-22552 DRUGU M
TITLE: Antipneumococcal Effects of C-Reactive Protein and Monoclonal Antibodies to Pneumococcal Cell Wall and Capsular Antigens.
AUTHOR: Briles D E; Forman C; Horowitz J C; Volanakis J E; Benjamin W H Jr; McDaniel L S
LOCATION: Birmingham, Alabama, United States
SOURCE: Infect.Immun. (57, No. 5, 1457-64, 1989) 5 Fig. 3 Tab. 41 Ref.
CODEN: INFIBR ISSN: 0019-9567
AVAIL. OF DOC.: Departments of Microbiology and Pediatrics, University of Alabama at Birmingham, Birmingham, Alabama 35294, U.S.A. (8 authors).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Monoclonal IgG2a antibodies to phosphocholine (PC), like IgG1, IgG2b and IgG3 antibodies to PC, were highly protective i.p. against pneumococcal infection in mice. Human antibody to PC was able to protect against pneumococcal infection in mice. Antibodies to pneumococcal surface protein A (**PspA**) were effective at mediating blood and peritoneal clearance of pneumococci. Complement was required for in vivo protective effects of both IgG and IgM antibodies to PC, as determined by using i.p. cobra venom factor (CVF, Cordis). Antibodies and human C-reactive proteins (CRP) that were reactive with capsular antigens but not cell wall antigens were able to mediate antibacterial activity in the blood bactericidal assay.

L129 ANSWER 21 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1987-45543 DRUGU M
TITLE: Impaired Immune Response to **Polysaccharides**.
AUTHOR: Rijkers G T; Kuis W; Graeff Meeder E De; Peeters C C A M; Zegers B J M
LOCATION: Utrecht, Netherlands
SOURCE: N.Engl.J.Med. (317, No. 13, 837-38, 1987) 1 Tab. 5 Ref.
CODEN: NEJMAG ISSN: 0028-4793
AVAIL. OF DOC.: University Hospital for Children and Youth, 3501 CA Utrecht, The Netherlands.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Patients with documented Strept. pneumoniae infections (sinusitis, pneumonia or otitis) and low levels or the absence of anti-**polysaccharide** antibodies, were immunized with Pneumovax (Merck-USA). 5 Childen with impaired immune response to the **polysaccharide** were identified. Serum immunoglobulin, antibody response to **protein antigens**, normal hemolytic complement and normal peripheral T and B lymphocytes. All 5 patients were considered to have selective anti-**polysaccharide** antibody deficiency.

L129 ANSWER 22 OF 38 DRUGU COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1985-36812 DRUGU T M
TITLE: Immmunological Paralysis to Pneumococcal **Polysaccharide** in Man.
AUTHOR: Pichichero M
LOCATION: Rochester, New York, United States
SOURCE: Lancet (1985, II, No. 8453, 464-71) 1 Tab. 31 Ref.
CODEN: LANCAO ISSN: 0140-6736
AVAIL. OF DOC.: Department of Pediatrics, University of Rochester Medical Center, Rochester, NY 14642, U.S.A.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The case of an infant boy with meningitis due to Strept. pneumoniae, which was initially treated with ampicillin and chloramphenicol and later with penicillin is presented. He made remarkable neurological recovery over the subsequent 4 yr during which he showed immunological paralysis to the causal serotype in s.c. Pneumovax (Merck-USA) but remained normally responsive to a **protein antigen** (tetanus toxoid), polysacharide antigens (Haemophilus influenzae type b capsule and pneumococcal capsule antigens other than the infecting/paralyzing serotype). He also received anticonvulsants and vasopressors for seizures and hypotension.

L129 ANSWER 23 OF 38 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2000:688113 CAPLUS
DOCUMENT NUMBER: 133:265640
TITLE: Bacterial polysaccharide antigen vaccine
INVENTOR(S): Capiau, Carine; Deschamps, Marguerite; Desmons, Pierre Michel; Laferriere, Craig Antony Joseph; Poolman, Jan; Prieels, Jean-paul
PATENT ASSIGNEE(S): Smithkline Beecham Biologicals S.A., Belg.
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056360	A2	20000928	WO 2000-EP2468	20000317
WO 2000056360	A3	20010125		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1163000	A2	20011219	EP 2000-912626	20000317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000009163	A	20011226	BR 2000-9163	20000317
NO 2001004325	A	20011114	NO 2001-4325	20010905

PRIORITY APPLN. INFO.: GB 1999-6437 A 19990319
GB 1999-9077 A 19990420
GB 1999-9466 A 19990423
GB 1999-16677 A 19990715

WO 2000-EP2468 W 20000317

AB The present invention relates to the field of bacterial polysaccharide antigen vaccines. In particular, the present invention relates to bacterial polysaccharides conjugated to protein D from H. influenzae.

L129 ANSWER 24 OF 38 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
ACCESSION NUMBER: 2000:688112 CAPLUS
DOCUMENT NUMBER: 133:265639
TITLE: Vaccine
INVENTOR(S): Capiau, Carine; Deschamps, Marguerite; Desmons, Pierre Michel; Laferriere, Craig Antony Joseph; Poolman, Jan; Prieels, Jean-Paul
PATENT ASSIGNEE(S): Smithkline Beecham Biologicals S.A., Belg.
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056359	A2	20000928	WO 2000-EP2467	20000317
WO 2000056359	A3	20010201		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1162999	A2	20011219	EP 2000-916983	20000317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000009166	A	20011226	BR 2000-9166	20000317
NO 2001004323	A	20011114	NO 2001-4323	20010905

PRIORITY APPLN. INFO.:
GB 1999-6437 A 19990319
GB 1999-9077 A 19990420
GB 1999-9466 A 19990423
GB 1999-16677 A 19990715
WO 2000-EP2467 W 20000317

AB The present invention relates to the field of bacterial polysaccharide antigen vaccines. In particular, the present invention relates to vaccines comprising a pneumococcal polysaccharide antigen, typically a pneumococcal polysaccharide conjugate antigen, formulated with a protein antigen form Streptococcus pneumoniae, and optionally a Th1-inducing adjuvant.

L129 ANSWER 25 OF 38 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
ACCESSION NUMBER: 2000:314569 CAPLUS
DOCUMENT NUMBER: 132:333378
TITLE: Method for preparing solid phase conjugate vaccines
INVENTOR(S): Lees, Andrew
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000025812	A2	20000511	WO 1999-US25425	19991029
WO 2000025812	A3	20000914		
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1124576	A2	20010822	EP 1999-971326	19991029
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-106090P P 19981029
WO 1999-US25425 W 19991029

AB A method of prepg. conjugate vaccines by adsorbing a protein to a solid phase adjuvant, and covalently linking a carbohydrate to the adsorbed protein. Alternatively, the carbohydrate is first adsorbed to the solid phase adjuvant, then the protein is covalently linked to the carbohydrate. The carbohydrate may be chem. activated. Unconjugated protein may be present.

L129 ANSWER 26 OF 38 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:36163 CAPLUS
DOCUMENT NUMBER: 135:75379
TITLE: **Pneumococcal** vaccines
AUTHOR(S): Briles, D. E.; Paton, J. C.; Swiatlo, E.; Nahm, M. H.
CORPORATE SOURCE: Department of Microbiology and Department of Pediatrics, University of Alabama at Birmingham, Birmingham, AL, 35294, USA
SOURCE: Gram-Positive Pathogens (2000), 244-250. Editor(s): Fischetti, Vincent A. American Society for Microbiology: Washington, D. C.
CODEN: 69AUVG
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 73 refs. Topics discussed include the pneumococcal capsular polysaccharide vaccine, polysaccharide-protein conjugate vaccines, and multivalent protein vaccines.
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L129 ANSWER 27 OF 38 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:23520 CAPLUS
DOCUMENT NUMBER: 135:209371
TITLE: The potential for using protein vaccines to protect against otitis media caused by **Streptococcus pneumoniae**
AUTHOR(S): Briles, D. E.; Hollingshead, S. K.; Nabors, G. S.; Paton, J. C.; Brooks-Walter, A.
CORPORATE SOURCE: Department of Microbiology, University of Alabama at Birmingham (UAB), Birmingham, AL, USA
SOURCE: Vaccine (2000), 19(Suppl. 1), S87-S95
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 34 refs. Potential vaccine strategies against otitis media are to prevent (1) symptomatic infections in the middle ear and/or (2) carriage of pneumococci and thereby subsequent middle ear infections. The possibility of using immunity to virulence proteins of pneumococci to elicit immunity against pneumococci has been examd. **PspA** has been found to have efficacy against otitis media in animals. Vaccination with a mixt. of **PsaA** and **PspA** has been obsd. to offer better protection against nasal carriage in mice, than vaccination with either protein alone. **PspA** and pneumolysin have been shown to

elicit protection against invasive infections. The inclusion of a few of these proteins into the polysaccharide-protein conjugate vaccines may be able to enhance their efficacy against otitis media and might be able to constitute a successful all-protein pneumococcal vaccine.
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L129 ANSWER 28 OF 38 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001320459 EMBASE
TITLE: The full monty.
AUTHOR: Thomson N.; Holden M.; Sebaihia M.; O-Trraga A.C.; Parkhill J.
CORPORATE SOURCE: . microbes@sanger.ac.uk
SOURCE: Trends in Microbiology, (1 Sep 2001) 9/9 (411-412).
Refs: 7
ISSN: 0966-842X CODEN: TRMIEA
PUBLISHER IDENT.: S 0966-842X(01)02178-3
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; (Short Survey)
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
015 Chest Diseases, Thoracic Surgery and Tuberculosis
037 Drug Literature Index
LANGUAGE: English

L129 ANSWER 29 OF 38 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000039154 EMBASE
TITLE: Acquired, but not innate, immune responses to Streptococcus pneumoniae are compromised by neutralization of CD40L.
AUTHOR: Hwang Y.-I.; Nahm M.H.; Briles D.E.; Thomas D.; Purkerson J.M.
CORPORATE SOURCE: J.M. Purkerson, Department of Pediatrics, Univ. of Rochester Sch. of Medicine, Box 777, 601 Elmwood Ave., Rochester, NY 14642, United States
SOURCE: Infection and Immunity, (2000) 68/2 (511-517).
Refs: 74
ISSN: 0019-9567 CODEN: INFIBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Streptococcus pneumoniae is a significant pathogen of young children and the elderly. Systemic infection by pneumococci is a complex process involving several bacterial and host factors. We have investigated the role of CD40L in host defense against pneumococcal infection. Treatment of mice with MR-1 antibody (anti-CD154/CD40L) markedly reduced antibody responses to the pneumococcal protein **PspA**, elicited by immunization of purified protein or whole bacteria. In mice immunized with whole bacteria, MR-1 treatment reduced antibody responses to capsular polysaccharides but not cell wall polysaccharides. MR-1 did not suppress antibody responses to isolated capsular polysaccharides but did reduce the production of antibody to a capsular polysaccharide-protein conjugate, indicating that when presented in the context of whole bacteria, the humoral response to capsular polysaccharides is partially T-cell dependent. Despite the reduction of the protective humoral responses to pneumococcal infection, administration of MR- 1 had no effect on sepsis, lung infection, or nasal carriage in nonimmune mice inoculated with virulent pneumococci. Thus, short-term neutralization of CD40L does not compromise innate host defenses against pneumococcal invasion.

L129 ANSWER 30 OF 38 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

ACCESSION NUMBER: 1999131917 EMBASE
TITLE: Differences in the avidity of antibodies evoked by four different pneumococcal conjugate vaccines in early childhood.
AUTHOR: Anttila M.; Eskola J.; Ahman H.; Kayhty H.
CORPORATE SOURCE: M. Anttila, Department of Vaccines, National Public Health Institute, Mannerheimintie 166, 00300 Helsinki, Finland. merja.anttila@ktl.fi
SOURCE: Vaccine, (9 Apr 1999) 17/15-16 (1970-1977).
Refs: 16
ISSN: 0264-410X CODEN: VACCDE
PUBLISHER IDENT.: S 0264-410X(98)00458-7
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Avidity of antibodies to Streptococcus pneumoniae type 6B, 14, 19F and 23F polysaccharides (PS) evoked by four different pneumococcal conjugate vaccines was compared. Infants were primed with pneumococcal PS conjugated to the variant diphtheria toxin CRM197 (PncCRM), diphtheria toxoid (PncD), tetanus toxoid (PncT) or meningococcal protein complex (PncOMPC) and boosted with the homologous conjugate or PS vaccine. No booster was given to children in the PncOMPC group. Relative antibody avidity was measured by thiocyanate EIA. No vaccine specific differences were found in avidity of anti-14 or - 19F antibodies. By contrast, antibody avidity to 6B and 23F differed significantly between the vaccine groups, PncCRM and PncT inducing antibodies of highest avidity.

L129 ANSWER 31 OF 38 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999246512 EMBASE
TITLE: Opsonic and nonopsonic interactions of C3 with Streptococcus pneumoniae.
AUTHOR: Hostetter M.K.
CORPORATE SOURCE: M.K. Hostetter, Section of Immunology, Department of Pediatrics, Yale Child Health Research Center, 464 Congress Ave., New Haven, CT 06520, United States. Margaret.Hostetter@yale.edu
SOURCE: Microbial Drug Resistance, (1999) 5/2 (85-89).
Refs: 29
ISSN: 1076-6294 CODEN: MDREFJ
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
LANGUAGE: English

L129 ANSWER 32 OF 38 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 95198178 EMBASE
DOCUMENT NUMBER: 1995198178
TITLE: Characterization of a recombinant pneumolysin and its use as a protein carrier for pneumococcal type 18C conjugate vaccines.
AUTHOR: Kuo J.; Douglas M.; Heesoo Kim Ree; Lindberg A.A.
CORPORATE SOURCE: Lederle Laboratories, Bldg. 60B,Pearl River, NY 10965, United States
SOURCE: Infection and Immunity, (1995) 63/7 (2706-2713).
ISSN: 0019-9567 CODEN: INFIBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Pneumolysin from Streptococcus pneumoniae was expressed in Escherichia coli as a glutathione S-transferase fusion protein and purified by affinity and hydroxylapatite chromatography. The purified recombinant pneumolysin (rPL), with a molecular mass of 53 kDa, had a specific activity of 3 x 105 hemolytic units per mg of protein on rabbit erythrocytes and reacted identically in immunodiffusion with the antisera against native pneumolysin. The rPL was used as a protein carrier to prepare conjugate vaccine with pneumococcal type 18C polysaccharide (PS18C). The PS18C was directly coupled to rPL by reductive amination or was indirectly coupled to rPL via a spacer molecule, adipic acid dihydrazide. The conjugates were nontoxic for mice and guinea pigs at 100 .mu.g per dose. The immunogenicity and protective efficacy of both conjugates were tested in mice. A single dose of either of the vaccines elicited a rise in immunoglobulin G antibody production; after two booster injections of the vaccines, statistically significant booster responses ($P < 0.001$) to both rPL and PS18C were produced. The sera containing the antibodies to rPL were capable of neutralizing the hemolytic activity of rPL to rabbit erythrocytes and the cytotoxicity of rPL to bovine pulmonary endothelial cells. Immunization with the conjugate vaccines conferred statistically significant protection in mice against lethal challenge with type 18C pneumococci.

L129 ANSWER 33 OF 38 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96065408 EMBASE
DOCUMENT NUMBER: 1996065408
TITLE: The molecular basis of pneumococcal infection: A hypothesis.
AUTHOR: Cundell D.; Masure H.R.; Tuomanen E.I.
CORPORATE SOURCE: Molecular Infectious Diseases Lab., Rockefeller University, 1230 York Avenue,New York, NY 10021, United States
SOURCE: Clinical Infectious Diseases, (1995) 21/6 SUPPL. 3 (S204-S212).
ISSN: 1058-4838 CODEN: CIDIEL
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 004 Microbiology
005 General Pathology and Pathological Anatomy
006 Internal Medicine
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB New insight has been gained into the mechanisms underlying the tissue tropism and inflammation of pneumococcal infection. Virulence has been linked to a transparent colonial morphology. Adherence has been characterized at the molecular level, and the importance of receptors arising upon activation of eukaryotic cells in promoting the progression to disease has been established. The contribution of peptidoglycan and teichoic acid to the generation of inflammation has suggested the need to couple anti-inflammatory therapy with antibiotic treatment in order to improve the outcome of invasive disease. Elucidation of the pathogenesis of pneumococcal infection, including the identification of virulence determinants by recently developed genetic strategies, can provide a paradigm for new mechanisms that are active in gram-positive bacterial infections and that are clearly distinct from the familiar pathways triggered by endotoxin.

L129 ANSWER 34 OF 38 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-616441 [71] WPIDS

DOC. NO. CPI: C2001-184587
TITLE: A **conjugate** useful for vaccinating against pathogenic microorganisms, particularly meningococcal or **pneumococcal** infection, comprises a capsular **polysaccharide** antigen and an iron uptake protein carrier .
DERWENT CLASS: B04 D16
INVENTOR(S): GORRINGE, A R; HUDSON, M J; REDDIN, K M; ROBINSON, A
PATENT ASSIGNEE(S): (MICR-N) MICROBIOLOGICAL RES AUTHORITY
COUNTRY COUNT: 95
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001072337	A1	20011004	(200171)*	EN	16
AU 2001042602	A	20011008	(200208)		

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001072337	A1	WO 2001-GB1361	20010327
AU 2001042602	A	AU 2001-42602	20010327

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2001042602	A	Based on	WO 200172337

PRIORITY APPLN. INFO: GB 2000-7432 20000327
AB WO 200172337 A UPAB: 20011203
NOVELTY - A conjugate (I), comprising a capsular **polysaccharide** antigen conjugated to a carrier protein associated with iron uptake by pathogenic microorganisms, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a **vaccine** comprising (I);
(2) conjugating an antigen to a carrier comprising:
(i) deriving an iron uptake protein; and
(ii) combining the protein with the capsular **polysaccharide** antigen to allow conjugation;
(3) using a transferrin binding protein to manufacture a carrier-antigen conjugate for vaccination;
(4) an affinity matrix for purifying the conjugate, comprising an immobilized ligand for an iron uptake protein; and
(5) purifying the conjugate comprising eluting it through the above affinity matrix.
USE - The conjugate is used as a **vaccine** against pathogenic microorganisms, particularly Neisseria meningitidis and **Streptococcus pneumoniae**.
ADVANTAGE - None given.
Dwg.0/3

L129 ANSWER 35 OF 38 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2001-080655 [09] WPIDS
DOC. NO. CPI: C2001-023245

TITLE: Novel methods for treating **Streptococcus pneumoniae** infection in mammals, by passive immunization with antibodies against **pneumococcal** surface protein A.
DERWENT CLASS: B04 D16
INVENTOR(S): BRILES, D; NABORS, G S
PATENT ASSIGNEE(S): (AVET) AVENTIS PASTEUR; (UABR-N) UAB RES FOUND
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000076587	A1	20001221	(200109)*	EN	24

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000054935 A 20010102 (200121)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000076587	A1	WO 2000-US16581	20000616
AU 2000054935	A	AU 2000-54935	20000616

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000054935	A	Based on	WO 200076587

PRIORITY APPLN. INFO: US 1999-139524P 19990616
AB WO 200076587 A UPAB: 20011129
NOVELTY - Treatment of mammals infected by **Streptococcus pneumoniae** by administering at least one **PspA** (**pneumococcal** surface protein A) antibody (Ab), is new.
ACTIVITY - Antibacterial.
MECHANISM OF ACTION - Passive immunization.
USE - The method is particularly used to treat humans infected by S. pneumoniae. Mice (7-8 weeks old) were infected with 300 colony-forming units of S. pneumoniae WU2 (capsule type 3; **PspA** clade 2) then 6 hours later they were given an intraperitoneal injection of 1.302 micro g antibody, raised in mice against **PspA**/Rx1M1, i.e. the N-terminal (1-314) region of **PspA** from strain Rx1 (ATCC 55834) that includes the mutation Met96Ile. All ten treated animals survived beyond day 28, as did 9 of ten animals treated with antibody 12 hours after infection. Control animals given only Ringers lactate, 12 hours after inoculation, were all dead within 6 days.
ADVANTAGE - The method is effective against all infectious strains of S. pneumoniae (since Ab are cross-reactive, independently of the particular **polysaccharide** type of the bacteria) and is not limited by antibiotic resistance. The method eliminates the need for bacterial typing and the need to combine antibodies against many different antigens from various strains, so is less complex and reduces delays in treatment.
Dwg.0/0

L129 ANSWER 36 OF 38 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-611595 [58] WPIDS
DOC. NO. CPI: C2000-183036

TITLE: Liquid **vaccine** containing **polysaccharide-protein conjugate antigen**, also contains trehalose as stabilizer to prevent loss of immunogenicity even on storage at ambient temperature.
DERWENT CLASS: B04 D16
INVENTOR(S): CARTIER, J R; LENTSCH, G S; CARTIER, J; LENTSCH GRAF, S
PATENT ASSIGNEE(S): (INMR) PASTEUR MERIEUX SERUMS & VACCINS SA; (AVET) AVENTIS PASTEUR
COUNTRY COUNT: 88
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000056365	A1	20000928	(200058)*	FR	16
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
FR 2791895	A1	20001013	(200061)		
AU 2000034389	A	20001009	(200103)		
EP 1163008	A1	20011219	(200206)	FR	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000056365	A1	WO 2000-FR730	20000323
FR 2791895	A1	FR 1999-3765	19990323
AU 2000034389	A	AU 2000-34389	20000323
EP 1163008	A1	EP 2000-912734	20000323
		WO 2000-FR730	20000323

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000034389	A	Based on	WO 200056365
EP 1163008	A1	Based on	WO 200056365

PRIORITY APPLN. INFO: FR 1999-3765 19990323
AB WO 200056365 A UPAB: 20001114
NOVELTY - A liquid **vaccine** composition, containing at least one antigen (A) consisting of a **polysaccharide** bonded to a carrier protein, additionally contains trehalose (I).
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method for stabilizing an (A)-containing liquid **vaccine** composition, comprising the addition of (I).
USE - (I) is useful for stabilizing (A)-based **vaccines** against various bacterial or fungal infections, especially **vaccines** against Haemophilus influenzae type b infections. The **vaccines** include polyvalent **vaccines** additionally containing other types of antigens, e.g. for immunization against viral infections.
ADVANTAGE - (I) effectively stabilizes the **vaccine** against loss of immunogenicity during the course of time, even on storage at ambient temperature. Typically **vaccines** containing 5% (I) retain their immunogenicity after storage for 6 months at 25 deg. C or 3 months at 37 deg. C. The **vaccine** can thus be stored in liquid form, to

avoid the need for lyophilization and reconstitution (with consequent time and expense) to ensure retention of immunogenicity. (I) is non-toxic at the concentrations used.
Dwg.0/0

L129 ANSWER 37 OF 38 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1998-311399 [27] WPIDS
CROSS REFERENCE: 1992-315939 [38]; 1994-359522 [45]; 1995-394157 [51]; 1996-030801 [04]; 1996-049021 [05]; 1997-042808 [04]; 1998-217031 [19]; 1998-505588 [43]; 1999-105118 [09]; 1999-166635 [14]; 1999-579913 [49]
DOC. NO. CPI: C1998-095969
TITLE: Truncated **pneumococcal** surface protein and cholera toxin B sub-unit fusion protein - useful as an immunogen against **Streptococcus pneumoniae**.
DERWENT CLASS: B04 D16
INVENTOR(S): BRILES, D E; YOTHER, J L
PATENT ASSIGNEE(S): (UABR-N) UAB RES FOUND
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5753463	A	19980519	(199827)*		22

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
US 5753463	A	CIP of	US 1991-656773	19910215
		Div ex	US 1992-835698	19920212
		Cont of	US 1993-72065	19930603
			US 1995-469434	19950606

PRIORITY APPLN. INFO: US 1992-835698 19920212; US 1991-656773 19910215; US 1993-72065 19930603; US 1995-469434 19950606

AB US 5753463 A UPAB: 20000405
A recombinant DNA molecule encoding a fusion protein comprising a truncated form of **pneumococcal** surface protein (**PspA**) and cholera toxin B subunit (CTB) is new, where the DNA molecule comprises a nucleotide sequence encoding the truncated **PspA** linked by an in-frame genetic fusion to a ctxB gene, and where the truncated **PspA** contains immunoprotective epitopes and up to 90% of the whole **PspA** protein, except for the cell membrane anchor region, the whole **PspA** protein having a defined sequence of 648 amino acids as given in the specification.

Also claimed are:

(a) a mutated strain of **Streptococcus pneumoniae** containing the recombinant DNA molecule;

(b) plasmid pJY4163; and

(c) a method for producing the fusion protein, comprising transforming a bacterium selected from (a strain of) **Streptococcus pneumoniae** or (a strain of) E. coli with the recombinant DNA molecule and growing the transformed bacterium to express the fusion protein.

USE - The fusion protein is useful for providing an immunogen to protect neonates and children against S.pneumoniae. Most antigenic proteins of this strain are not immunogenic enough to provide protection. The antigenic epitopes of the fusion protein are directed against capsular **polysaccharide** antigens of S.pneumoniae, specifically it contains

the protective epitopes of **PspA**. The protein can also be used in solid-phase immunoadsorbent assays, since it is readily bound to supports coated with monosialoganglioside GM1.

ADVANTAGE - The fusion protein is more immunogenic against S.pneumoniae than using **PspA** alone as the immunogen.

Dwg.0/7

L129 ANSWER 38 OF 38 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1987-009027 [02] WPIDS
DOC. NO. CPI: C1987-003413
TITLE: New glycoproteinic **conjugates** - prepd. from **protein antigen** and oligosaccharide hapten(s), derived from capsular **polysaccharide** of Gram-positive and Gram-negative bacteria.
DERWENT CLASS: B04 D16
INVENTOR(S): COSTANTINO, P; PORRO, M
PATENT ASSIGNEE(S): (ISTS) IST SIEROTERAPEUTICO & VACCINOGENO
COUNTRY COUNT: 14
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 208375	A	19870114	(198702)*	EN	12
R: AT BE CH DE FR GB LI LU NL SE					
JP 62030726	A	19870209	(198711)		
US 4711779	A	19871208	(198751)		9
CA 1272952	A	19900821	(199039)		
IT 1187753	B	19871223	(199044)		
EP 208375	B	19911211	(199150)		
R: AT BE CH DE FR GB LI LU NL SE					
DE 3682838	G	19920123	(199205)		
JP 07121870	B2	19951225	(199605)		9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 208375	A	EP 1986-201160	19860702
JP 62030726	A	JP 1986-156342	19860704
US 4711779	A	US 1986-881091	19860702
JP 07121870	B2	JP 1986-156342	19860704

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 07121870	B2	Based on	JP 62030726

PRIORITY APPLN. INFO: IT 1985-21451 19850705
AB EP 208375 A UPAB: 19930922
New glycoproteinic conjugates (I), with trivalent immunogenic activity are obtd. by covalent binding of a proteinic antigen, namely CRM 197, tetanus toxoid or pertussis toxin, with an oligosaccharidic hapten derived from the capsular **polysaccharide** of a Gram-positive bacterium and with one derived from the capsular **polysaccharide** of a Gram-negative bacterium. The haptens are first activated by introduction of terminal ester gps.

Pref. Gram-positive bacteria are **Streptococcus pneumoniae** and S. beta-emoliticus. Pref. Gram-negative bacteria are Neisseria meningitidis, Haemophilus influenzae, Pseudomonas aeruginosa and E.coli.

USE/ADVANTAGE - (I) are useful as **vaccines** against capsulate Gram-positive and Gram-negative bacteria, partic. meningococcus

and **pneumococcus**.
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